PDR MEDICAL DICTIONARY

FIRST EDITION

PDR®

Medical Dictionary

MEDICAL ECONOMICS
MONTVALE, NEW JERSEY

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Database design by Lexi-Comp Inc., Hudson, OH
Printed in the United States of America by R.R. Donnelley & Sons Company

ISBN 1-56363-117-2

p. ner'vi op'tici, SYN optic *disk*.
optic p. (p), SYN optic *disk*.
palatine p., SYN incisive p.
parotid p., the projection at the opening of the parotid duct into the vestibule of the mouth opposite the neck of the upper second molar tooth. SYN p. parotidea [NA].
p. parotid'ea [NA], SYN parotid p.
p. pi'li, a knoblike indentation of the bottom of the hair follicle, upon which the hair bulb fits like a cap; it is derived from the corium and contains vascular loops for the nourishment of the hair root. SYN hair p.
renal p., the apex of a renal pyramid that projects into a minor calyx; some 10 to 25 openings of papillary ducts occur on its tip, forming the area cribrosa. SYN p. renalis [NA].
p. rena'lis, pl. **papil'lae rena'les** [NA], SYN renal p.
retrocuspid p., a small tissue tag located on the mandibular gingiva lingual to the cuspid teeth; usually occurs bilaterally, is more commonly identified in children, and is considered a normal anatomic structure.
tactile p., one of the papillae of the dermis containing a tactile cell or corpuscle.
urethral p., p. urethra'lis, the slight projection often present in the vestibule of the vagina marking the urethral orifice.
p. valla'ta, pl. **papil'lae valla'tae** [NA], SYN vallate p.
vallate p., one of eight or ten projections from the dorsum of the tongue forming a row anterior to and parallel with the sulcus terminalis; each p. is surrounded by a circular trench (fossa) having a slightly raised outer wall (vallum); on the sides of the vallate p. and the opposed margin of the vallum are numerous taste buds. SYN p. vallata [NA], circumvallate p.
vascular papillae, dermal papillae containing vascular loops.
p. of Vater, SYN major duodenal p.

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pap·il·lary, pap·il·late (pap'i-lār-ē, -i-lāt). Relating to, resembling, or provided with papillae.
pap·il·lec·to·my (pap-i-lek'tō-mē). Surgical removal of any papilla. [papilla + G. *ektomē,* excision]
pa·pil·le·de·ma (pă-pil-e-dē'mă). Edema of the optic disk, often due to increased intracranial pressure. SYN choked disk. [papilla + edema]
pap·il·lif·er·ous (pap-i-lif'er-ŭs). Provided with papillae. [papilla + L. *fero,* to bear]
pa·pil·li·form (pă-pil'i-fōrm). Resembling or shaped like a papilla.
pap·il·li·tis (pap-i-lī'tis). **1.** Optic neuritis with swelling of the optic disk. **2.** Inflammation of the renal papilla. [papilla + G. *-itis,* inflammation]
foliate p., inflamed vestigial foliate papillae on the posterior lateral tongue.
necrotizing p., SYN renal papillary *necrosis*.
papillo-. A papilla, papillary. [L. *papilla*]
pap·il·lo·ad·e·no·cys·to·ma (pap'i-lō-ad'ĕ-nō-sis-tō'mă). A benign epithelial neoplasm characterized by glands or glandlike structures, formation of cysts, and finger-like projections of neoplastic cells covering a core of fibrous connective tissue.
pap·il·lo·car·ci·no·ma (pap'i-lō-kar-si-nō'mă). **1.** A papilloma that has become malignant. **2.** A carcinoma that is characterized by papillary, finger-like projections of neoplastic cells in association with cores of fibrous stroma as a supporting structure. [papilla + G. *karkinōma,* cancer]
pap·il·lo·ma (pap-i-lō'mă). A circumscribed benign epithelial tumor projecting from the surrounding surface; more precisely, a benign epithelial neoplasm consisting of villous or arborescent outgrowths of fibrovascular stroma covered by neoplastic cells. SYN papillary tumor, villoma. [papilla + G. *-oma,* tumor]
p. acumina'tum, obsolete term for *condyloma* acuminatum.
basal cell p., SYN seborrheic *keratosis*.
p. canalic'ulum, a papillomatous benign tumor arising within the duct of a gland.
canine oral p., warts affecting mucous membranes of young dogs; caused by a papillomavirus.
p. diffu'sum, widespread occurrence of p.'s.
duct p., SYN intraductal p.
p. du'rum, a wart, corn, or cutaneous horn. SYN hard p.
hard p., SYN p. durum.
Hopmann's p., a papillomatous overgrowth of the nasal mucous membrane. SYN Hopmann's polyp.
infectious p. of cattle, single or multiple rough nodules on the skin and mucous membranes caused by a papillomavirus; in young cattle, which are most susceptible, they are most numerous on the head, neck, and shoulders; in cows they usually affect the udder and teats. SYN cattle warts.
p. inguina'le trop'icum, a cutaneous eruption, occurring in Colombia, characterized by numerous slender pink vegetations in the inguinal region.
intracystic p., a p. growing within a cystic adenoma, filling the cavity with a mass of branching epithelial processes.
intraductal p., a small, often nonpalpable, benign p. arising in a lactiferous duct and frequently causing bleeding from the nipple. SYN duct p.
inverted p., a mucosal tumor of the urinary bladder or nasal cavity in which proliferating epithelium is invaginated beneath the surface and is more smoothly rounded than in other p.'s.
p. mol'le, SYN soft p.
Shope p., a papillomatous growth found in wild cottontail rabbits that is caused by a virus in the family Papovaviridae and can be transferred to domestic rabbits where it will cause similar growths. A high percentage of these growths may become malignant.
soft p., a p. with only a thin layer of horny epithelium. SYN p. molle.
transitional cell p., a benign papillary tumor of transitional epithelium; in the urinary tract, frequently called transitional cell carcinoma, grade I, because of the likelihood of its recurrence.
p. vene'reum, obsolete term for *condyloma* acuminatum.
villous p., a p. composed of slender, finger-like excrescences occurring in the bladder or large intestine, or from the choroid plexus of the cerebral ventricles; villous p.'s of the colon are usually sessile and frequently become malignant. SYN villous tumor.
zymotic p., SYN yaws.
pap·il·lo·ma·to·sis (pap'i-lō-mă-tō'sis). **1.** The development of numerous papillomas. **2.** Papillary projections of the epidermis forming a microscopically undulating surface.
confluent and reticulate p., discrete and confluent gray-brown papules of the anterior and posterior mid-chest, spreading gradually; *Malassezia furfur* has been found in the keratin layer. SYN Gougerot-Carteaud syndrome.
florid oral p., diffuse involvement of the lips and oral mucosa with benign squamous papillomas; microscopically, it resembles verrucous carcinoma, but is not invasive or localized to a specific area of the oral mucosa.
juvenile p., a form of fibrocystic disease of the breast in young women, with florid and sclerosing adenosis that microscopically may suggest carcinoma.
laryngeal p., multiple squamous papillomas of the larynx, seen most commonly in young children, usually due to infection by the human papilloma virus which may be transmitted at birth from the maternal condylomata; recurrences are common, with remission after several years.
palatal p., SYN inflammatory papillary *hyperplasia*.
subareolar duct p., a benign tumor which may clinically resemble Paget's disease, but which is a papillary or solid growth of columnar and myoepithelial cells producing a florid pseudoinfiltrative pattern. SYN adenoma of nipple, erosive adenomatosis of nipple.
pap·il·lo·ma·tous (pap-i-lō'mă-tŭs). Relating to a papilloma.
Pa·pil·lo·ma·vi·rus (pap-i-lō'mă-vī-rŭs). A genus of viruses (family Papovaviridae) containing DNA (MW 5×10^6), having virions about 55 nm in diameter, and including the papilloma and warts viruses of man and other animals, some of which are associated with inductions of carcinoma. Over 70 types are

known to infect man and are differentiated by DNA homology. SYN papilloma virus.

Papillon, M.M., 20th century French dermatologist. SEE P.-Lefèvre *syndrome*.

Papillon-Léage, E., 20th century French dentist. SEE Papillon-Léage and Psaume *syndrome*.

pap·il·lo·ret·i·ni·tis (pap′i-lō-ret-i-nī′tis). SYN neuroretinitis.

pap·il·lot·o·my (pă-pi-lot′ō-mē). An incision into the major duodenal papilla. [papilla + G. *tomē*, incision]

pa·pil·lu·la, pl. **pa·pil·lu·lae** (pă-pil′yū-lă, -lē). A small papilla. [Mod. L. dim. of L. *papilla*]

Pa·po·va·vir·i·dae (pă-po′vă-vir′i-dē). A family of small, antigenically distinct viruses that replicate in nuclei of infected cells; most have oncogenic properties. Virions are 45 to 55 nm in diameter, nonenveloped, and ether-resistant; capsids are icosahedral with 72 capsomeres, and they contain double-stranded DNA (MW 3 to 5×10^6). The family includes the genera *Papillomavirus* and *Polyomavirus*. [*pa*pilloma + *po*lyoma + *va*cuolating]

pa·po·va·vi·rus (pă-pō′vă-vī′rŭs). Any virus of the family Papovaviridae.

PAPP Abbreviation for *p*-aminopropiophenone.

Pappenheim, Artur, German physician, 1870–1916. SEE P.'s *stain;* Unna-P. *stain*.

Pap·pen·hei·mer. A.M., U.S. pathologist, 1878–1955. His work in experimental pathology was extensive and included studies of the thymus, identification of the role of lice transmission in trench *fever*, development of an experimental model for rickets, and evaluation of viral infections in animals. SEE Pappenheimer *bodies*, under *body*.

Pappenheimer bod·ies. See under body.

pap·pose, pap·pous (pap′pōs, pap′pŭs). Downy. [G. *pappos*, down]

pap·pus (pap′ŭs). The first downy growth of beard. [G. *pappos*, down]

PAPS Abbreviation for adenosine 3′-phosphate 5′-phosphosulfate; 3′-phosphoadenosine 5′-phosphosulfate.

pap·u·la, pl. **pap·u·lae** (pap′yū-lă, -lē). SYN papule. [L.]

pap·u·lar (pap′yū-lăr). Relating to papules.

pap·u·la·tion (pap-yū-lā′shŭn). The formation of papules.

pap·ule (pap′yūl). A small, circumscribed, solid elevation on the skin. SYN papula. [L. *papula*, pimple]

Celsus' p.'s, SYN *lichen agrius*.

follicular p., a papular lesion arising about a hair follicle; not specific for any condition.

moist p., mucous p., SYN *condyloma latum*.

piezogenic pedal p., pressure-induced papules of the heel, occurring probably as a result of herniation of fat tissue.

pruritic urticarial p.'s and plaques of pregnancy (PUPPP), intensely pruritic papulovesicles that begin on the abdomen in the third trimester and spread peripherally, resolves rapidly after delivery and does not affect the fetus.

split p.'s, p.'s at commissures of the mouth seen in some cases of secondary syphilis.

pap·u·lif·er·ous (pap-yū-lif′er-ŭs). Having papules. [papule + L. *fero*, to bear]

papulo-. Papule. [L. *papula*, papule]

pap·u·lo·er·y·them·a·tous (pap′yū-lō-er-i-them′ă-tŭs, -thē′mă-tŭs). Denoting an eruption of papules on an erythematous surface.

pap·u·lo·pus·tu·lar (pap′yū-lō-pŭs′tū-lăr). Denoting an eruption composed of papules and pustules.

pap·u·lo·pus·tule (pap′yū-lō-pŭs′tyūl). A small semisolid skin elevation which rapidly evolves into a pustule.

pa·pu·lo·sis (pap-yū-lō′sis). The occurrence of numerous widespread papules.

bowenoid p., a clinically benign form of intraepithelial neoplasia that microscopically resembles Bowen's disease or carcinoma in situ, occurring in young individuals of both sexes on the genital or perianal skin usually as multiple well-demarcated pigmented warty papules.

lymphomatoid p., a chronic papular and ulcerative pityriasis lichenoides et varioliformis acuta characteriz mal perivascular infiltration by atypical T lymphocyte tive of a lymphoma; it is usually benign, but transfor lymphoma has been reported.

malignant atrophic p., a cutaneovisceral syndrome ized by pathognomonic umbilicated porcelain-white pa elevated telangiectatic annular borders, followed by th ment of intestinal ulcers which perforate, causing arterioles in the lesions are occluded by thrombosis v flammatory cells, leading to infarction, progressive ne disability, and death. SYN Degos' disease, Degos' sync

pap·u·lo·squa·mous (pap′yū-lō-skwā′mŭs). Denotin tion composed of both papules and scales. [papulo- + L *sus*, scaly (squamous)]

pap·u·lo·ves·i·cle (pap′yū-lō-ves′i-kl). A small sem elevation which evolves into a blister.

pap·u·lo·ve·sic·u·lar (pap′yū-lō-ve-sik′yū-lăr). De eruption composed of papules and vesicles.

pap·y·ra·ceous (pap-i-rā′shŭs). Like parchment or *papyraceus*, made of *papyrus*]

par. A pair; specifically a pair of cranial nerves, *e.g.*, ninth pair, glossopharyngeal; p. vagum, the vagus or [L. equal]

para (par′ă). A woman who has given birth to on infants. Para followed by a roman numeral or pre Latin prefix (primi-, secundi-, terti-, quadri-, etc.) de number of times a pregnancy has culminated in multiple birth; *e.g.*, **para I**, primipara; a woman wh birth for the first time; **para II**, secundipara; a wom given birth for the second time to one or more gravida. [L. *pario*, to bring forth]

para-. **1.** Prefix denoting a departure from the norm denoting involvement of two like parts or a pair. **3.** P ing adjacent, alongside, near, etc. **4** (*p*-). In chemistr cized prefix two substitutions in the benzene ring ar metrically, *i.e.*, linked to opposite carbon atoms in t words beginning with *para-* or *p*-, see the specifi alongside of, near]

para-ac·ti·no·my·co·sis (par-ă-ak′ti-nō-mī- kō′sis). fection, usually pulmonary, resembling actinomycosi caused by nocardiosis. SYN pseudoactinomycosis.

par·a·ami·no·ben·zo·ic ac·id (par′ă-mē′nō). SYN zoic acid.

para-ap·pen·di·ci·tis (par′ă-ă-pen-di-sī′tis). SYN p tis.

par·a·bal·lism (par-ă-bal′izm). Severe jerking m both legs. [para- + G. *ballismos*, jumping about]

par·a·ban·ic ac·id (par′ă-ban-ik). SYN oxalylurea.

par·a·bi·o·sis (par-ă-bī-ō′sis). **1.** Fusion of whole eg os, as occurs in conjoined twins. **2.** Surgical joining lar systems of two organisms. [para- + G. *biōsis*, lif

par·a·bi·ot·ic (par-ă-bī-ot′ik). Relating to, or cha parabiosis.

par·a·bu·lia (par-ă-bū′lē-ă). Perversion of volitio which one impulse is checked and replaced by ano G. *boulē*, will]

par·ac·an·tho·ma (par′ak-an-thō′mă). A neoplasm abnormal hyperplasia of the prickle cell layer of th + G. *akantha*, a thorn, + *-oma*, tumor]

par·ac·an·tho·sis (par′ak-an-thō′sis). **1.** The de paracanthomas. **2.** A division of tumors that includ ous epitheliomas.

par·a·car·mine. SEE paracarmine *stain*.

par·a·ca·se·in (par-ă-kā′sē-in). The compound pr action of rennin upon κ-casein (which liberates a and that precipitates with calcium ion as the insolu

Paracelsus, Aureolus Theophrastus Bombastus vo Swiss physician, 1493–1541. SEE paracelsian *meth*

par·a·ce·nes·the·sia (par′ă-sē-nes-thē′zē-ă). D one's sense of bodily well-being, *i.e.*, of the norm

has been demonstrated in lesions smaller of presentation.

aggressiveness and poor prognosis of AS, are limited. Radical excision is currently choice and may be difficult to accomplish in the face. Amputation with shoulder disartic- pelvectomy are recommended for tumors extremities. As stated, AS tends to extend far appreciated margins, thus complicating cases of AS have been treated by MMS in an margins; however, the difference between vasculature may be difficult to interpret on even with the use of immunohistochemical of AS is poor, with a mortality rate of 50% at diagnosis. The 5-year survival rate is approxi-

ssociated AS (LAS) was first reported by [281-283] in 6 patients with postmastectomy each case, AS developed in the ipsilateral arm several years after mastectomy. Subsequently, after axillary node dissection for melanoma of congenital lymphedema, filarial lymphe- idiopathic lymphedema. The risk for devel- after mastectomy is approximately 5%. The is the medial aspect of the upper arm.

a violaceous plaque or nodule superim- nonpitting edema. Ulceration may develop genesis of LAS is incompletely understood to imbalances in local immune regulation leading to proliferation of neoplastic cells. poor, and survival rates are comparable to AS scalp and face. Long-term survival has been amputation of the affected limb.

ced AS has been reported to occur after RT gnant conditions.[279,284-286] AS may occur from RT for benign conditions, including acne and 10 to 25 years after RT for malignancies. Lesions ated with radiation and are clinically and histo- to AS involving the scalp and face. Prognosis is able to that observed in other forms of AS.

AS (EAS) is a rare, recently described variant of volve the lower extremities.[278] On microscopi- ing tumor may mimic an epithelial neoplasm, rounded, epithelioid cells intermingled with vascular channels. Epithelioid AS results in ases within 1 year of presentation. Prognosis, of AS, is poor.

OMA

(KS) is an indolent vascular tumor that has into epidemiologic variants including clas- idemic KS, iatrogenic KS, and epidemic, nodeficiency syndrome–associated (AIDS-[19,273,287-289] Classic KS affects elderly men, with ce in Ashkenazi Jews and in persons of Medi- Classic KS typically presents with violaceous wer extremities. Slow progression with coales- is observed. Eventually, the disease enters a and may ultimately progress to a hyperkeratotic phase.

African endemic KS can be further subdivided into a generally benign nodular disease, predominantly affecting young adults, and a fulminant lymphadenopathic disease, predominantly affecting children.[290] Nodular African endemic KS also presents with violaceous macules that eventually progress to form plaques and nodules. Cutaneous and mucous membrane involvement are rare in lymphadenopathic endemic KS.

Iatrogenic KS occurs in the context of immunosuppressive drug therapy.[62] Iatrogenic KS is usually chronic but may be somewhat more aggressive than classic KS. Iatrogenic KS presents with lesions similar to those observed in classic KS. The lesions may regress on withdrawal of the immunosuppressive agent.

Epidemic KS appears in approximately 21% of homosexual men with AIDS.[287] It is considered to be a sexually transmitted disease, and the etiologic agent appears to be human herpesvirus-8 (HHV-8). Epidemic KS presents with violaceous macules involving the face, chest, and oral mucosa. The hard palate and ocular conjunctiva are frequently involved.

KS, for the most part, behaves in an indolent fashion, with some variance according to epidemiologic subtype. Patients with longstanding classic KS may show visceral involvement, but this is usually asymptomatic. The adult variant of endemic KS tends to follow an indolent course as well. In contrast, lymphadenopathic endemic KS progresses to fulminant, fatal disease. Iatrogenic KS is somewhat more aggressive than classic KS; however, lesions usually regress on discontinuation of immunosuppressive therapy. In epidemic KS, extracutaneous involvement is commonly encountered in lymph nodes, gastrointestinal tract, and lungs. Disseminated disease accounts for death in 10% to 20% of patients with epidemic KS.

On microscopical examination, KS varies according to patch, plaque, and nodular subtypes. The histologic changes in early patch-stage KS are inconspicuous, leading to misdiagnosis of a benign inflammatory process. A superficial and deep perivascular infiltrate with increased numbers of jagged vascular spaces is observed in the dermis. The thin-walled vessels surround normal vessels and adnexal structures, resulting in the so-called promontory sign. Plasma cells may be seen surrounding the newly formed vessels. In plaque-stage KS, the entire dermis and superficial fat may be involved, with an increase in the number of spindle cells arranged in small fascicles between collagen bundles centered around proliferating vascular channels. The spindle cells outline irregular slit-like vascular spaces that contain erythrocytes. In nodular KS, the number of spindle cells increases. They are arranged in interwoven fascicles with erythrocytes scattered in the interstices. Although nuclear atypia, mitotic figures, and pleomorphism may be observed, these are not prominent. Cells that stain positively for factor VIII–related antigen and spindle cells that stain positively for *Ulex europeaus* I lectin line well-formed vessels within KS lesions.

Both local and systemic therapies have been used in the management of KS, depending on epidemiologic context, extent of disease, and concomitant disease.[279,290-294] KS has been treated successfully using cryosurgery, RT, laser ablation, and intralesional injection of cytotoxic agents. Local infiltration with vincristine has been particularly effective in the treatment of oral lesions in epidemic AIDS-associated KS. Other, more aggressive approaches have included systemic therapy with interferon or with single- or multiagent chemotherapy. Tur and Brenner[293] treated 11 classic KS patients with low-dose subcutaneous interferon-α for 6 months. Initial response,